

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. Contract Number POKA-2004-B-0018-JJ		Page of Pages 1 24			
2. Amendment/Modification Number 4		3. Effective Date 11/12/2004		4. Requisition/Purchase Request No.		5. Solicitation Caption Reconstruction of F Street, NW		
6. Issued By: District Department of Transportation Construction Contract Branch 2000 14th Street, NW, 6th Floor Washington, DC 20009				Code			7. Administered By (If other than line 6) Procurement Support Branch 2000 14th Street, NW, 3rd Floor, Bid Room Washington, DC 20009	
8. Name and Address of Contractor (No. Street, city, country, state and ZIP Code)				(X)		9A. Amendment of Solicitation No. POKA-2004-B-0018-JJ		
						9B. Dated (See Item 11) 9/28/2004		
						10A. Modification of Contract/Order No.		
						10B. Dated (See Item 13)		
Code		Facility						
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS								
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input checked="" type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or fax which includes a reference to the solicitation and amendment number. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or fax, provided each letter or telegram makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.								
12. Accounting and Appropriation Data (If Required)								
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14								
A. This change order is issued pursuant to: (Specify Authority)								
The changes set forth in Item 14 are made in the contract/order no. in item 10A.								
B. The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation date, etc.) set forth in item 14, pursuant to the authority of 27 DCMR, Chapter 36, Section 3601.2.								
C. This supplemental agreement is entered into pursuant to authority of:								
D. Other (Specify type of modification and authority)								
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.								
14. Description of amendment/modification (Organized by UCF Section headings, including solicitation/contract subject matter where feasible.)								
The Bid Opening date of November 17, 2004 is extended The New Bid Opening date is November 23, 2004 This addendum consists of this cover sheet and 23 pages attached hereto. Please note that the revised plans are available from the Construction Support Branch (Bid Room) - 2000 14th Street NW 3rd Floor, Washington DC 20009 For those bidders who wish to use Expedite Bid, the Schedule of Items is available on diskette from the Construction Support Branch (Bid Room) 2000 14th Street NW 3rd Floor Washington, DC 20009								
Except as provided herein, all terms and conditions of the document referenced in Item (9A or 10A) remain unchanged and in full force and effect								
15A. Name and Title of Signer (Type or print)				16A. Name of Contracting Officer Jerry M. Carter				
15B. Name of Contractor		15C. Date Signed		16B. District of Columbia		16C. Date Signed 11/12/2004		
(Signature of person authorized to sign)				(Signature of Contracting Officer)				

Government of the District of Columbia
Department of Transportation
Construction Contract Branch
2000-14th Street, N.W. 6th Floor
Washington, D.C. 20009

ADDENDUM No.4

ISSUED: November 12, 2004

23 pages

Invitation No. POKA-2004-B-0018-JJ

Title: Reconstruction of F Street NW, from 17th to 23rd Street
FAP No. STP-4000(78)

BIDDERS shall acknowledge receipt of this addendum on official Bid Form. Failure to do so may result in rejection of your bid.

CURRENT BID OPENING

November 17th, 2004

BIDDERS are informed that the above named project is modified as follows:

NEW BID OPENING DATE

The Bid Opening Date has been extended until November 23, 2004.

BID FORMS AND PROPOSALS

DELETE the Schedule of Items in its entirety and **REPLACE** with attached Schedule of Items. (Pages 1R-11R) attached

SPECIFICATIONS

DELETE SP No. 1(B) in its entirety and **REPLACE** with the following:

"1(B) Construction of new full depth asphalt pavement as shown in the design documents."

REPLACE SP No. 55(D)(3)c., "Conversion Kits Metal Halide" with attached SP "SODIUM VAPOR CONVERSION KITS".

Addendum No. 4 Reconstruction of F Street NW From 17TH To 23RD Street

REPLACE all references to "400W Metal Halide" with "250W High Pressure Sodium".

ADD NEW SP No. 68, "BITUMINOUS CONCRETE MIXTURES AND PERFORMANCE GRADE ASPHALT BINDERS, Items 403011, 403013" as attached.

ADD NEW SP No. 69, "THERMOPLASTIC PAVEMENT MARKING" as attached.

PLANS

REPLACE sheet 3, Summary of Quantities with attached sheet 3R.

REPLACE sheet 12, Typical Sections with attached sheet 12R.

REPLACE sheet 66, Electrical/Lighting with attached sheet 66R.

REPLACE sheets 97, 98, 99, 100, 101, 104, 105, 106, 114, 115, 116, 122, 123, 125 in Traffic Signal plans with attached sheets 97R, 98R, 99R, 100R, 101R, 104R, 105R, 106R, 114R, 115R, 116R, 122R, 123R, 125R.

DELETE General Note no. 4 on sheets 97, 102, 107, 112, 117.

REPLACE all references to "400W Metal Halide" with "250W High Pressure Sodium".

QUESTIONS AND RESPONSES

Various questions have been submitted and/or presented at the Pre-Bid Meeting on October 20th, 2004. These questions and the responses as well as additional changes are provided below and are part of this contract.

SCHEDULE OF ITEMS

DATE:

REVISED:

CONTRACT ID: KA2004B0018JJ

PROJECT(S): STP-4000(78)

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001						
0010	000003 Employee Training	2000.000				
		HR		.		.
0020	200007 Earthwork and Excavation Special Item - LF - STREETCAR TRACK REMOVAL - 207 005	700.000				
		LF		.		.
0030	202002 Common Excavation	8100.000				
		CY		.		.
0040	204002 Embankment Fill	500.000				
		CY		.		.
0050	207002 Trench Excavation and Backfill	2157.000				
		CY		.		.
0060	207006 Gravel for Trench Undercut	165.000				
		CY		.		.
0070	209002 Aggregate Base Course	4500.000				
		CY		.		.
0080	302002 Valve Casing	46.000				
		EACH		.		.
0090	303002 Abandon Valve Casing	12.000				
		EACH		.		.
0100	303004 Remove Fire Hydrant	7.000				
		EACH		.		.

Addendum No. 4
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PROJECT(S): STP-4000(78)

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	304002 Butterfly Valve Manhole	1.000 EACH	.		.	
0120	305002 Ductile Iron Pipe, 4 - 8 Inch	3800.000 LF	.		.	
0130	305006 Ductile Iron Pipe, 16 Inch	40.000 LF	.		.	
0140	305018 Extra Fittingd - Contractor Furnished	100.000 LBS	.		.	
0150	306002 Gate Butterfly Valve, 3 - 12 Inch	40.000 EACH	.		.	
0160	306004 Gate Butterfly Valve, 16 Inch	1.000 EACH	.		.	
0170	306991 Gate Butterfly Valve Special Item - EACH - REMOVE EXISITING 4-8 INCH GATE VALVE - 306 015	24.000 EACH	.		.	
0180	307002 Set Fire Hydrant	7.000 EACH	.		.	
0190	307004 Relocate Fire Hydrant	2.000 EACH	.		.	
0200	307008 Furnish Fire Hydrant	2.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0210	307010 Convert Fire Hydrant	EACH 3.000	.		.	
0220	308004 Water Service Pipe, 1-1/4 to 2 Inch	LF 1050.000	.		.	
0230	308014 Furnish and Install Curb Stop/Curb Stop Box	EACH 25.000	.		.	
0240	308018 Water Service Test Hole	EACH 30.000	.		.	
0250	308024 Adjust Water Meter Frame	EACH 10.000	.		.	
0260	308028 Adjust Curb Cock Box	EACH 10.000	.		.	
0270	308030 Adjust Water Valve Box	EACH 10.000	.		.	
0280	308991 Water Service Connections Special Item -EA - FUR AND INS WATER METER BOX AND REINSTALL EXIST FRAME AND COVERS 308 017	EACH 25.000	.		.	
0290	309002 Sewer Manhole on Sewer 48 Inch and Less Dia.	VLF 33.000	.		.	
0300	310002 Standard Basin	EACH 11.000	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0310	310004 Standard Double Basin	18.000 EACH	.		.	
0320	310008 Basin Connect PCC Pipe, Class III, 15 Inch	500.000 LF	.		.	
0330	311002 Adjust Sewer-Water-Utility Manhole Frame	70.000 EACH	.		.	
0340	311991 Adjust, Rebuild&Replace Manhole&Catchbasin-Special Item -EA- CLEAN SEWER STRUCTURE - 311 063	5.000 EACH	.		.	
0350	313002 Abandon Basin Connecting Pipe	14.000 EACH	.		.	
0360	313006 Abandon Basin	17.000 EACH	.		.	
0370	314004 PCC Pipe, Class III, Gasket, 15 Inch	49.000 LF	.		.	
0380	314991 Sewer Pipe Special Item - LF - CLEAN PCC PIPE - 311 065	45.000 LF	.		.	
0390	315002 Pipe Sewer TV Inspection - LS -	LUMP	LUMP		.	
0400	322002 PCC Thrust Block	6.000 CY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0410	323002 PCC Collar for Sewers	2.000 CY	.		.	
0420	324002 PCC In-Line Thrust Block	13.000 EACH	.		.	
0430	403991 Hot Bituminous Pavement Special Item - TON - SUPERPAVE BASE COURSE, 19.0MM MIX-403 013	4600.000 TON	.		.	
0440	403991 Hot Bituminous Pavement Special Item - TON - SUPERPAVE SURFACE COURSE, 12.5MM MIX 403 011	1550.000 TON	.		.	
0450	406002 Tack Coat	13000.000 SY	.		.	
0460	407002 Bituminous Prime Coat	5061.000 GAL	.		.	
0470	411002 Temporary AC	100.000 TON	.		.	
0480	501010 Reinforced PCC Pavement, 12 Inch	90.000 SY	.		.	
0490	501022 Additional Standard Portland Cement	50.000 BAGS	.		.	
0500	505024 Replace Driveway-Alley Entrance, 7 Inch	440.000 SY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0510	506004 Repair PCC Base	20.000 CY	.		.	
0520	607991 Misc. Fencing Special Item - LF - TEMPORARY SAFETY FENCE - 607 005	5000.000 LF	.		.	
0530	608004 PCC Sidewalk, 4 Inch	385.000 SY	.		.	
0540	608024 Brick Sidewalk on PCC Base	6230.000 SY	.		.	
0550	608036 Block Sidewalk Repair on PCC Base	50.000 SY	.		.	
0560	609052 Repair-Replace PCC Circular Curb and/or Gutter	5.000 CY	.		.	
0570	609068 Furnish and Set 8"x12" Granite Straight Curb	4900.000 LF	.		.	
0580	609070 Furnish and Set 8"x12" Granite Circular Curb, Radius Under 10 Ft.	170.000 LF	.		.	
0590	609072 Furnish and Set 8"x12" Granite Circular Curb, Radius 10-100 Ft.	190.000 LF	.		.	
0600	609086 Reset Stone Curb	500.000 LF	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0610	609204 PCC Wheelchair/Bicycle Ramp	174.000 SY	.		.	
0620	609500 Brick Gutter	6400.000 LF	.		.	
0630	609992 Curb, Gutter, & Paved Flume Special Item - SY - DETECTABLE WARNING PAVERS ON EXIST. RAMPS 609 203	6.000 SY	.		.	
0640	611002 Remove Tree and Stump up to 6 Inch Dia.	2.000 EACH	.		.	
0650	611038 Trim Tree 6 Inch Dia. and Under	5.000 EACH	.		.	
0660	611040 Trim Tree 6 Inch to 12 Inch Dia.	5.000 EACH	.		.	
0670	611060 Mulch	400.000 SY	.		.	
0680	611999 Tree, Shrub, Vine, & Ground Cover Special Item - EACH - TREE PLANTING - 611 199	11.000 EACH	.		.	
0690	612002 Mobilization	LUMP	LUMP		.	
0700	614012 Portable Precast PCC Barrier	2425.000 LF	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0710	616004 Construction Lane Closing	LUMP	LUMP			.
0720	616006 Remove Lane Markings	SF 100.000	.		.	
0730	616008 Temporary Construction Sign Supports	EACH 38.000	.		.	
0740	616012 Construction Warning and Detour Signs	SF 605.000	.		.	
0750	616014 Reflectorized Traffic Cones	EACH 35.000	.		.	
0760	616016 Flashing Amber Warning Lights, Type "B"	EACH 20.000	.		.	
0770	616020 Sequential Arrow Boards	EACH 1.000	.		.	
0780	616022 Construction Sign Warning Flags	EACH 25.000	.		.	
0790	616024 Type III PVC Barricade	EACH 24.000	.		.	
0800	616028 Traffic Drums	EACH 20.000	.		.	
0810	616040 Thermoplastic Pavement Marking, 4 Inch	LF 1100.000	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0820	616044 Thermoplastic Pavement Marking, 6 Inch	250.000 LF	.		.	
0830	616050 Thermoplastic Pavement Marking, 12 Inch	1620.000 LF	.		.	
0840	616070 Taped Lane Marking, 4 Inch	330.000 LF	.		.	
0850	616090 Construction Zone Attenuator	6.000 EACH	.		.	
0860	617991 Membrane Waterproofing Special Item - SY - WATERPROOF COATING 617 005	300.000 SY	.		.	
0870	618154 Remove #18 Cast Iron Street Light Pole	34.000 EACH	.		.	
0880	618250 Remove Street Light Pole Foundation	34.000 EACH	.		.	
0890	618294 48 x 48 x 48 Inch Manhole	12.000 EACH	.		.	
0900	618340 2 Inch PVC, Schedule 40 Rigid Conduit	2500.000 LF	.		.	
0910	618352 #10 Stranded Wire	5000.000 LF	.		.	
0920	618354 #8 Stranded Wire	2600.000 LF	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0930	618362 #2 Stranded Wire	2700.000 LF	.		.	
0940	618372 #0000 Stranded Wire	7800.000 LF	.		.	
0950	618526 #18 Cast Iron Pole	38.000 EACH	.		.	
0960	618991 Electrical Work Special Item -LS- TRAFFIC SIGNAL WORK - 618 003	LUMP	LUMP		.	
0970	618993 Electrical Work Special Item -LF- 2-4 INCH PVC SCHEDULE 40 RIGID CONDUIT DUCT BANK 618 341	210.000 LF	.		.	
0980	618993 Electrical Work Special Item -LF- 6-4 INCH PVC SCHEDULE 40 RIGID CONDUIT DUCT BANK 618 343	2300.000 LF	.		.	
0990	618999 Payment to PEPCO for connection and disconnection of service to streetlights and traffic signals PAYMENT TO PEPCO	LUMP	LUMP		20000.00	
1000	620014 Traffic Sign Panels	495.000 SF	.		.	
1010	620040 Federal Aid Project Sign	1.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1020	620991 Traffic Signing Special Item - LF - STEEL DRIVE POST 620 011	1608.000 LF	.		.	
1030	620993 Traffic Signing Special Item - EACH - REBUILDING DC SIGN 620 041	1.000 EACH	.		.	
1040	621002 Pavement Profiling (Milling) MILL 2 1/2 INCHES	1180.000 SY	.		.	
1050	624002 Steel Protection Plate, 5x10 Ft.	10.000 EACH	.		.	
1060	626002 Engineer's Field Facilities	LUMP	LUMP		.	
1070	626011 Progress Photographs	LUMP	LUMP		.	
1080	626015 As-Built Drawings	LUMP	LUMP		.	
1090	627002 Field Layout	LUMP	LUMP		.	
1100	628002 Erosion and Sediment Control	LUMP	LUMP		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	

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SODIUM VAPOR CONVERSION KITS

250W GE Cat # KITS25S1H071 or approved equal

The kits shall be for 120 Volt operation and must fit into a # 18 casing for the 250W. The kit shall include a completely prewired magnetic regulator ballast for High Power Factor Reactor ballast for 250W, with Mogal base lamp socket, terminal block and the necessary brackets for mounting the kits into the casing. The ballast shall be a magnetic regulator type capable of starting the lamp at -30 F. The lamp wattage shall not vary more than 18% over a + 10% voltage spread. The power factor shall not be less than 90%.

The ballast for the 250W, lamp wattage for nominal line voltage and nominal voltage the ballast design center will not vary more than 5% from rated lamp watts. At any lamp voltage, from nominal through life, the lamp wattage regulation spread at that lamp voltage shall not exceed 25% for +5% line voltage variation. The ballast must reliably start and operate the lamp in ambient temperatures down to -30 F for the rated life of the lamp. Ballast primary current during starting may exceed normal operating current. The lamp current crest factor shall not exceed 1.8 for +5% line voltage variation at any lamp voltage, from nominal through life. The power factor of the lamp ballast system shall not drop below 90% for +10% line voltage variations at any lamp voltage from nominal through life. The ballast shall be capable of starting and operating one 250W (250w Kit) High Pressure Sodium Vapor lamp from a nominal 120 volt 60 Hz power source within the limits specified by the lamp manufacturer. The ballast, including the starting aid, must protect itself against mogal lamp failure modes. The ballast shall be capable of operation with the lamp in an open-or short circuit-condition for six months without significant loss of ballast life.

HPS LAMPS - All lamps will be High pressure Sodium Vapor and will be of the same type and performance specified by the fixture or kit manufacturer. Lamp substitutions are acceptable, provided the manufacturer has verified identical performance of the fixture with the substituted lamp. Lamps will be manufactured by General Electric, Phillips or Sylvania.

SUPPLEMENTAL PROVISIONS

68. BITUMINOUS CONCRETE MIXTURES AND PERFORMANCE GRADE ASPHALT BINDERS: Items 403 011, 403 013

CERTIFICATION. The manufacturer and hauler shall furnish certifications as specified in DPW Standard Specifications.

The manufacturer shall also certify:

- (a) Date and time of loading.
- (b) Tank or blending system
- (c) Identification of hauling unit.
- (d) Binder grade, temperature, and quantity of materials.
- (e) Complete certified analysis.
- (f) Lot number, if applicable.
- (g) Mixing and compaction temperatures when the binder is polymer modified.

The hauler shall also certify

- (a) Identification of hauling unit
- (b) Binder grade and source of last delivery.
- (c) The date of the last delivery using this hauling tank and volume of material remaining in the tank at the time of current loading.

A.) Performance Graded Asphalt Binders. For mixes containing all virgin materials shall conform to AASHTO MP Table 1, for PG 70-22 binder (Interstates, Other Freeways and Expressway, Principles, and Minors) or PG 64-22 (Local and Collectors) . The asphalt binder recovered from the final plant mixed material will be considered Rolling Thin Film Oven (RTFO) material and shall conform to AASHTO MP1, Table I for the specified performance grade.

The PG binder shall be pre-approved by DDOT.

The Contractor shall submit a certificate of analysis showing conformance with the PG Binder Specification AASHTO MPI and the critical cracking temperature as described in the Binder ETO Draft, Standard Practice for Determination of Low-Temperature Performance Grade (PG) of Asphalt Binder, for the binders specified in the Contract Documents.

The PG binder for HMA mixes shall be achieved by the use of Neat Asphalt with elastomer polymer modifications when needed.

B.) Aggregates. Aggregates shall conform to Section 803.03, 803.04 and AASHTO MP2 with the exception that the aggregate retained on the 4.75 mm sieve shall be tested for flat

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and elongated particles in conformance with ASTM D 4791.

C.) Mix Design. The Contractor shall develop a Superpave mix design in conformance with AASHTO PP 28. HMA Superpave mixes – i.e., 9.5mm (when surface course is less than 1.5 inches) 12.5mm (when surface course is greater than 1.5 inches) Surface Course, 9.5mm Leveling Course, and 19.0mm Base or as directed by the Engineer, shall conform to the specification for Superpave Volumetric Mix Design, AASHTO MP 2, and shall be designed for a thirty (30) million Equivalent Single Axle Loading (ESAL).

The Contractor shall not use crushed, recycled asphalt pavement (RAP) material, crushed glass roofing shingles from manufacturing waste.

D.) Mix Design Approval. Documents containing the data from the Contractor's laboratory study shall be submitted to the Engineer for tentative approval at least two weeks prior to paving operations using DDOT approved AASHTO software, and shall include the following

- (a) Mix designation and Contract number shall be on the Contract documents.
- (b) Source and percentage of aggregate.
- (c) Source, percentage, and grade of performance graded asphalt binder.
- (ii) Anticipated gradation and proportion of each component aggregate.
- (e) Combined cold feed grading, extracted grading, or ignited grading
- (1) Plant where HMA mix will be produced.
- (g) Plant target mixing temperature based on viscosity of 0.22 Pascal.
- (h) Percent passing No. 200 sieve removed by dust collecting system.
- (i) Ratio of dust to binder material on effective asphalt.
- (j) Maximum specific gravity at the target binder content.
- (k) Mix design grading plotted on 0.45 power gradation chart.
- (l) Tensile strength ratio and worksheets
- (m) The gyratory compaction curve for N_{max}.
- (n) The bulk specific gravity at N_{design} gyrations.
- (o) The air void content (percent V_a) at N_{initial}, N_{design}, and N_{max} gyrations
- (p) The voids in the mineral aggregate (percent VMA) and the voids filled with asphalt (percent VFA) at N_{design} gyrations (TP4).
- (q) The slope of the gyratory compaction curve.

E.) All consensus and source properties.

- (1) Coarse aggregate angularity.
- (2) Flat and elongated

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- (3) Sand equivalent.
- (4) Un-compacted void content of fine aggregate.
- (5) Bulk and apparent specific gravity of coarse and fine aggregate.
- (6) Absorption of coarse and fine aggregate

Mix designs submitted to the Engineer for approval shall be accompanied by a quantity of job mix formula aggregate and appropriate amount of required PG binder for ignition oven calibration.

If previous construction or performance experience has shown the proposed mix design to be unsatisfactory, the Engineer may require the Contractor to submit a more suitable design.

If the Contractor proposes to change the source of aggregate used in the mix, a revised "Mix design shall be submitted with the information required. The conditions set forth above relative to initial submission shall apply. If a change in the Performance Grade binder source becomes necessary. DDOT requires an anti-stripping additive test in conformance with ASTM D 4867 before giving the final approval; a DDOT approved anti-stripping is required in all AC mixtures.

F.) Field Verification of Mix Design: After receiving the tentative approval for the mix design from the Engineer, the Contractor shall conduct a field verification of the mix at the beginning of production in each plant. The certified personnel shall perform Field verification. The verification samples shall be prepared as specified in PP28. The Contractor shall notify the Engineer at least two working days in advance of the scheduled verification.

G.) Verification Evaluation:

(a) Initial verification shall consist of four samples tested for the parameters of the approved mix design. These samples shall be randomly drawn from the first day's production. If the first day of production is less than 500 tons, the Contractor may choose to spread verification testing over the number of days needed to accumulate 500 tons. The verification testing shall be completed on the day when production has reached the 500 tons. The Contractor shall evaluate the verification tests results

(b) If the mix produced by the plant conforms to the parameters, production may proceed without any changes. If the Contractor has submitted mixes with identical aggregate combinations and differing asphalt contents associated with changes in ESAL loads, verification will be limited to volumetric analysis at the Engineer's discretion.

(c) If the mix produced by the plant does not conform to the parameters, then an adjustment to the asphalt content or gradation may be made to bring the mix design requirements within acceptable levels.

Permissible adjustment limitations between the approved Mix Design and Adjusted Mix Design are as follows:

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TEST PROPERTY	PERMISSIBLE ADJUSTMENT %(*)
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Larger than 1/2 in. (12.5 mm) sieve:	± 5
1/2 in. (12.5 mm) through No.4 (4.75 mm) sieves:	± 4
No.8 (2.36mm) through No. 100 (1.50 mm) sieves:	± 3
No. 200 (75 um) sieve:	± 1.0
Binder Content:	± 0.20

* The permissible adjustment for all mixes shall establish a job mix formula having targets outside the restricted zone. Additionally, Superpave mixes shall be within control points.

When an adjustment is made to the mix design, a second verification shall be performed to ensure that the modified mix conforms to all design requirements. The time and tonnage limitations shall be as specified in **(a)** above. Material produced during this verification will be subject to removal as specified in DPW Standard Specifications if it does not conform to Specifications.

If the adjusted mix conforms to the mix design parameters, production may proceed; if it does not conform, production shall be suspended and a new mix design shall be submitted to the Engineer for approval. The new mix design shall be designed as specified in AASHTO PP28.

(d) Subsequent mix designs submitted due to nonconformance will be subject to removal as specified in DPW Standard Specifications. If the mix does not conform to **(b)** above during the initial verification, production for the mix shall be suspended until the Engineer takes corrective action.

The Contractor shall obtain pavement cores at the direction of the engineer within twenty-four (24) hours after lay-down.

Measure and Payment

The unit of measure for Hot Mixed Asphaltic Concrete of the Superpave mix specified will be the ton. The number of tons will be actual number of tons complete in place as weighed on approved truck scales. The Engineer will deduct the weight of all material lost, wasted, damaged, rejected or applied in excess of the Engineer's direction or contrary to these specifications.

The number of tons of the Superpave mix will be paid for at the contract price per ton, which payment will be full compensation for the work specified complete in place.

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69. **THERMOPLASTIC PAVEMENT MARKING, 4 INCH, Item 616 040**
THERMOPLASTIC PAVEMENT MARKING, 6 INCH, Item 616 044
THERMOPLASTIC PAVEMENT MARKING, 12 INCH, Item 616 050

This supplements 616.15 of the standard specifications.

(A) GENERAL – Work under these items consists of furnishing all materials for and installation of permanent Thermoplastic Lane Markings on permanent bituminous asphalt pavement meeting the requirements of AASHTO M249.

(B) MATERIALS – All materials for this work shall meet the requirements of AASHTO M249.

(C) APPLICATION PROPERTIES:

1. The thermoplastic material shall readily extrude at temperature of 400 to 425 degree F from approved equipment to produce a line 1/8 to 3/16 inch thick which shall be continuous and uniform in shape having clear and sharp dimensions. The width of the line shall be as shown on the plans 0.25 inch. The material shall be extruded at a minimum temperature 400° - 440°F.
2. The material shall be applied when the ambient temperature is not less than 45°F and the pavement temperature is no less than 55°F.
3. The application of additional glass beads by drop on methods shall be at a rate specified by the purchaser and agreed upon by the applicator.

(D) CONSTRUCTION METHODS – Prior to application, the pavement surfaces to which the marking material will be applied shall be completely cleaned and allowed to dry. The material shall be applied to the road surface in a molten state by mechanical means with surface application of glass beads at the rate of 6 pounds per gallon. The newly applied markings shall be protected from intrusion by traffic by means of traffic cones, safety barrels or other approved means. Upon cooling to normal pavement temperature, it shall produce an adherent reflectorized stripe or surface of specified surface and width capable of resisting deformation by traffic.

(E) PACKAGING AND MARKING – The thermoplastic material shall be packaged in suitable containers to which it will not adhere during shipment and storage. The blocks of cast thermoplastic material shall be approximately 12 by 36 by 2 inch and shall weigh approximately 50 pounds. Each container shall designate the color, manufacturer's name, batch number and date of manufacture. Each batch manufactured shall have its own separate number. The label shall warn the user that the material shall be heated to 400 to 425°F during application.

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(F) MEASURE AND PAYMENT – Supplementing 616.15(E), payment will be made to include performance of work specified herein.

QUESTIONS AND ANSWERS

1. Sheet 66 of 125: Under electrical notes, note G calls for maintaining temporary lighting during construction. There is no bid item covering temporary lighting. Is this an oversight or should the cost be spread over the bid items?

Response: As stated on sheet 58, paragraph 5 of the Special Provisions, the contractor is responsible for keeping the existing or new lights on from notice to proceed to completion of the contract. The cost for maintaining the lights shall be incidental to the electrical work.

2. Sheet 66 of 125: Electrical note L calls for stainless steel anchor bolts, while the specifications (page 62) and details on sheet 73 of 125 seem to call for galvanized anchor bolts. Please clarify.

Response: Galvanized steel anchor bolts are acceptable in lieu of stainless steel.

3. Sheet 73 of 125:

- A. Pole foundation calls for 1-1/4" anchor bolts. Using 1-1/4" anchor bolts presents a clearance problem in the #18 cast iron pole. Consideration should be given to using a 1" diameter anchor bolt. Please advise.

Response: 1" anchor bolt is acceptable for use in the #18 pole foundation.

- B. The same detail calls for installing a 1" diameter ground rod. This exceeds requirements to properly ground these poles. Past installations have used 3/4" diameter ground rod. There does not appear to be a source for 1" x 15' ground rods. Please advise.

Response: As stated in the Special Provisions, sheet 66, use 3/4" x 15' ground rods for streetlight foundations..

- C. The same detail calls for exothermic connection to the ground rod. Past installations have used mechanical connection to facilitate ease of disconnecting if necessary. Please advise.

Response: Exothermic weld for ground connection is correct.

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4. Sheet 99 of 125: Intersection of F Street and 17th Street – the conduit symbol shown connecting manholes M6 to M7 and M7 to M8 indicate this to be new conduit. Is this the owner's intent? A note on the same drawing indicates an existing conduit between existing manhole M8 and proposed manhole B. Please explain how this is possible.

Response: Conduit between manholes M6-M7-M8 should have been installed by others. The conduit running from M8 to proposed manhole B is new (a stub out should have been provided in M8 by others, but this is not certain).

5. The intersections with 17th Street (Pole D) and 18th Street (Poles A, B and E) show lighting units that are not addressed in the lighting plan. There is no information regarding what type or wattage are required. Please clarify.

Response: Lighting type and wattage should be replaced in kind; Project assumes 250W HPS.

6. Intersections at 17th, 18th and 20th Streets indicate eight foot mast arms mounted to #18 and Twin-20 decorative poles. The mast arm note B calls for the bottom of the signal on mast arms to be 16' above the roadway surface. This type of installation will not provide adequate clearance. Please advise. Our pole manufacturer's agent feels that this would also call for a heavier duty pole than indicated. Please advise.

Response: There will be no mast arms on the #18 or twin 20 decorative poles. The drawings have been revised.

7. Sheet 115 of 125: Under the conduit summary list here is an entry "A-DC MH" which calls for one (1) two inch conduit fifty-five feet in length. This item does not show on the plans. Please clarify.

Response: Disregard this conduit and length. It should not be included on this conduit summary.

8. Some proposed #18 pole locations on the Traffic plans are redundant with proposed #18 pole locations on the lighting plans. Is it the owner's intent to have extra poles, castings and fixtures to renew your stock or is this an oversight? Please clarify.

Response: Note, these pole locations are to be combination poles. The light pole, foundation and luminaire are paid for under the lighting items and the signal head, conduit, etc. are included in the lump sum traffic signal work item.

9. Bid Item Sheet 9 – Line 0900 – 618340 – 2 Inch PVC, Schedule 40 Rigid Conduit. This bid item shows a quantity of 663 linear feet. Scaling the drawings produces a quantity of approximately 2470 linear feet. Please clarify.

Response: The quantity shown on the summary of quantities and in the bid item sheet appears to be in error. The actual quantity should be 2500 LF.

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10. Bid Item Sheet 10 – Line 0970 – 618993 – Electrical Work Special Item – LF – 2-4 Inch PVC Schedule 40 Rigid Conduit Duct Bank 618 341

This bid item shows a quantity of 210 linear feet. Scaling the drawings produces a quantity of approximately 235 linear feet. Please clarify.

Response: This item is paid for by the linear feet. Minor adjustments to the quantities are common and the adjustments will be paid for on a unit bid price basis.

11. Standard DDOT practice in the past, when installing both lighting and traffic control into the same pole has been to install separate conduits for each system (typically one four inch for traffic signal cables and one two inch for the lighting power. The traffic system drawings for this job show only one conduit to each location. This is according to the conduit schedules shown on sheets 100, 105, 110, 115 and 120 of 125. Please review and advise as to the owners requirements.

Response: At the time that these plans were prepared, the standard practice was to use only one 4 inch conduit for lighting and signal power. This has been approved by DDOT Traffic Signals for use on this project since the plans were completed and shelved several years ago.

12. On sheet 122 of 125 "Communication Cable and Conduit Detail No. 1" the legends referring to the cables running north parallel to 17th Street between TEC1 and TC6 indicate 2-12PR Comm. Cable. The proposed Cable Routing on sheet 125 of 125 does not support this. Please clarify.

Response: Drawing 125 is correct. Sheet 122, showing the cables running north parallel to 17th Street between TEC1 and TC6 should indicate 1-12PR Comm. Cable, not 2.

13. On page 1 of the Traffic Signal Technical Specifications, the third paragraph defines the word "proposed" as meaning to furnish and install new equipment. On Sheet 97 of 125 (this is 17th street 1st page) of the Traffic Drawings, under General Notes, Note 4 calls for storing and subsequently re-installing the existing equipment. Please clarify this contradiction.

Response: Note 4 should not have been included on this sheet since it is a new design. It was not addressed in the revision.

14. Please provide the size and species of tree to be used for Item 611 199. Special provision 50 does not help the contractor to provide the best unit price for this item.

Response: DDOT has informed us that the tree species and size is to be Red Maple, 2-2 ½" Cal.

15. On the summary of quantities on drawing 125 of 125 how are items 39 thru 43 paid for? They are not included on the bid form.

Response: All the items listed on sheet 125 are to be included in the lump sum item for

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Traffic Signal Work.

16. The quantity of signal poles and Combination poles looks too high on the traffic signal summary sheet 125. Please confirm the quantities.

Response:

17th & F: **Final** - 3- 20' poles, 1 No. 20 combo poles; **Temp** - 4- 20' poles

18th & F: **Final** - 2-20' poles, 3 No. 18 combo poles; **Temp** - 5- 20' poles

19th & F: **Final** - 3-20' poles, 1 No. 18 combo pole; **Temp** - 5- 20' poles

20th & F: **Final** - 1-20' pole, 3 No. 18 combo poles; **Temp** - 5- 20' poles

22nd & F: **Final** - 3-20' poles, 2 No. 18 combo poles; **Temp** - NONE

Totals should be: 9 No. 18 poles, 1 No. 20 pole, 12-20 ' poles and 19 temporary 20' poles for staging.

They were not updated on the revisions.